

WHAT IS CLAIMED:

1           1. A method for use in wireless equipment, the method comprising the steps of:  
2           receiving a signal;  
3           processing the received signal to generate a Yamamoto-Itoh (*YI*) metric; and  
4           providing a Bit-Error-Rate (*BER*) estimate for the received signal as a function of  
5           the *YI* metric.

1           2. The method of claim 1 wherein the providing step further comprises the steps  
2           of:  
3           retrieving, from at least one look-up table stored in a memory, values for a  
4           compensation factor as a function of a value of the generated *YI* metric and an initial *BER*  
5           estimate as a function of the generated *YI* metric; and  
6           modifying the initial *BER* estimate value with the retrieved compensation factor  
7           value to provide the *BER* estimate.

1           3. A method for use in wireless equipment, the method comprising the steps of:  
2           processing a received signal to provide at least one Yamamoto-Itoh (*YI*) metric  
3           value over a time period;  
4           selecting a compensation factor value as a function of the provided *YI* metric  
5           value;  
6           selecting an initial *BER* estimate value as a function of the provided *YI* metric  
7           value; and  
8           providing a Bit-Error-Rate (*BER*) estimate for the received signal as a function of  
9           the initial *BER* estimate value and the selected compensation factor value.

1           4. The method of claim 3 wherein the providing step further includes the step of  
2           multiplying the selected compensation factor value with the initial *BER* estimate value to  
3           provide the *BER* estimate.

4           5. A method for use in wireless equipment, the method comprising the steps of:  
5           processing a received signal to provide an initial *BER* estimate value for the

1 received signal;

2 modifying the initial *BER* estimate value for the received signal with a  
3 compensation factor value to provide a Bit-Error-Rate (*BER*) estimate for the received  
4 signal, wherein the compensation factor value is determined as a function of at least one  
5 Yamamoto Itoh (*YI*) metric value.

1 6. Apparatus for use in wireless equipment, the apparatus comprising:  
2 a convolutional decoder for processing a received signal for use in determining at  
3 least one Yamamoto-Itoh (*YI*) metric value; and  
4 a processor for providing a Bit-Error-Rate (*BER*) estimate for the received signal  
5 as a function of the at least one *YI* metric value.

1 7. The apparatus of claim 6 wherein the processor (a) retrieves, from at least one  
2 look-up table stored in a memory, a compensation factor value as a function of the at least  
3 one *YI* metric value, and an initial *BER* estimate value as a function of the at least one *YI*  
4 metric value, and (b) modifies the initial *BER* estimate value with the retrieved  
5 compensation factor value to provide the *BER* estimate.

1 8. The apparatus of claim 6 wherein the processor (a) determines a compensation  
2 factor value as a function of the at least one *YI* metric value, (b) determines an initial *BER*  
3 estimate value as a function of the at least one *YI* metric value, and (c) provides the *BER*  
4 estimate for the received signal as a function of the initial *BER* estimate value and the  
5 selected compensation factor value.

1 9. The apparatus of claim 8 wherein the processor multiplies the selected  
2 compensation factor value with the initial *BER* estimate value to provide the *BER*  
3 estimate.

1 10. A wireless receiver comprising:  
2 a processor; and  
3 a memory for storing a look-up table;  
4 wherein the processor uses a Yamamoto-Itoh (*YI*) metric value as an index into the  
5 look-up table to retrieve an associated Bit-Error-Rate (*BER*) for a received signal.

- 1           11. A wireless receiver comprising:
- 2           a memory for storing a look-up table such that an index into the look-up table is a
- 3 Yamamoto-Itoh (*YI*) metric value for retrieving an initial Bit-Error-Rate (*BER*) estimate
- 4 value stored therein; and
- 5           a processor for modifying the initial *BER* value with a scale factor to provide a
- 6 Bit-Error-Rate (*BER*) estimate for a received signal.